

A NEW SPECIES OF *PHORBELLIA* ROBINEAU-DESVOIDY
SEPARATED FROM A PREVIOUSLY DESCRIBED
NORTH AMERICAN SPECIES
(DIPTERA: SCIOMYZIDAE)

R. E. ORTH AND G. C. STEYSKAL

(REO) Staff Research Associate, Department of Entomology, Division of Biological Control, University of California, Riverside, California 92521; (GCS) Research Entomologist, Systematic Entomology Laboratory, IIBIII, Agric. Res., Sci. and Educ. Admin., USDA, % U.S. National Museum of Natural History, Washington, D.C. 20560.

Abstract.—A new species, *Pherbellia suspecta*, is separated from the recently described Nearctic *P. subtilis* Orth and Steyskal. Both are members of the *P. ventralis* group. A collection locality map indicates the North American distribution of this group, which includes *P. obscura* Ringdahl, an Holarctic species. Terminalia illustrations are included for the above as well as for *P. ventralis* (Fallén), a Palaearctic species.

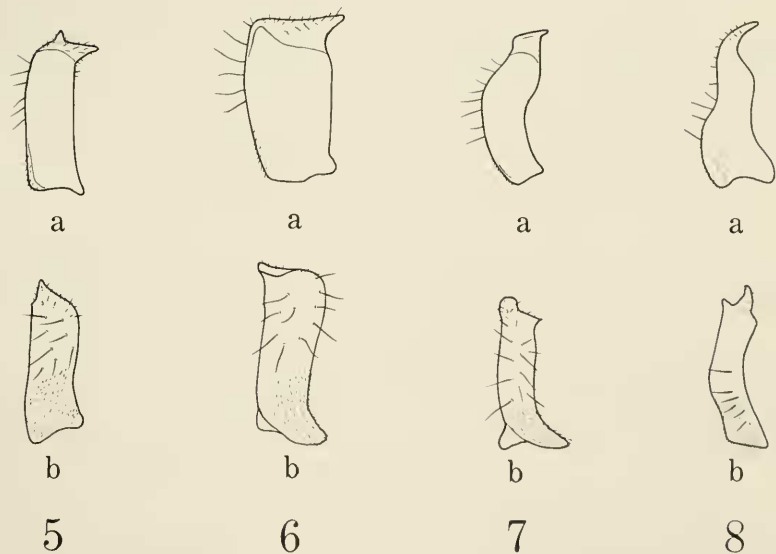
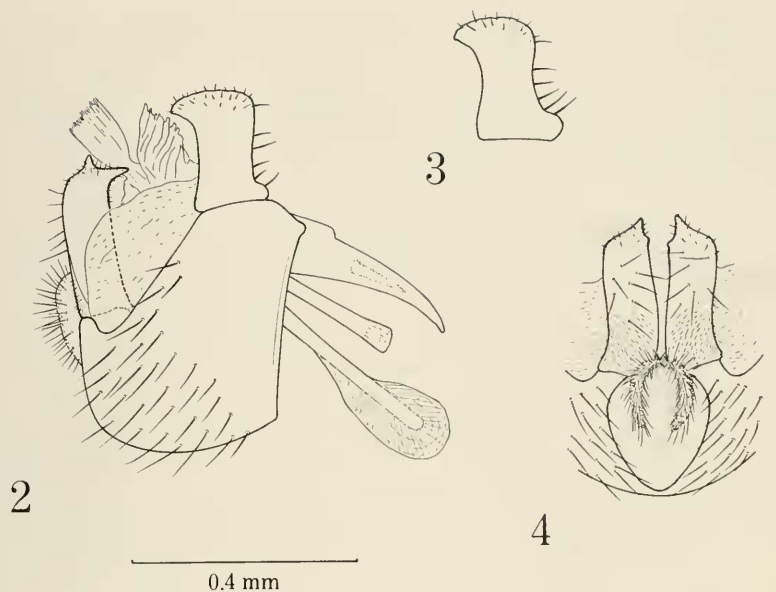
The new species, *Pherbellia suspecta*, described here was recognized too late to be included in a recent paper by Orth et al. (1980) on the *P. ventralis* group. Examination of material from the Biosystematics Research Institute, Agriculture Canada, now confirms an additional North American species in the subgenus *Chetocera* belonging to the *P. ventralis* group. Members of this group are typified by the European species *P. ventralis* (Fallén). In North America the group now consists of the Holarctic species, *P. obscura* Ringdahl, and two Nearctic species, *P. subtilis* and *P. suspecta*. Distribution of *P. suspecta* is mid-Canadian to northeastern United States. This new species was at first thought to be a variant of *P. subtilis*. However, now that additional material has been seen, we recognize it as a distinct species. At Banff National Park, Alberta, Canada, *P. suspecta* is sympatric with *P. subtilis* and *P. obscura*. Throughout the geographic distribution of the above three species, we have seen no intergrades that might suggest that this new species is a variant of the two previously recognized species.



Fig. 1. *Pherbellia suspecta*, holotype male. Abdominal segments excised and retained in genitalia capsule on pin beneath specimen.

Pherbellia suspecta Orth and Steyskal, NEW SPECIES
Figs. 1-5

Holotype male.—Height of head $\frac{2}{3}$ width. Medifacies yellowish pruinose, parafacies and cheeks pruinose yellowish to whitish, respectively. Frons dull yellowish, slightly narrowed anteriorly. Midfrontal stripe extending less than $\frac{1}{2}$ distance from anterior ocellus to anterior margin of frons. Ocellar triangle and orbital plates with greyish pruinosity. Orbital plates strongly tapered anteriorly, extending slightly beyond midfrontal stripe. Orbitoantennal spot lacking, narrow strip of grey pruinosity along upper orbital margin. Two pairs of fronto-orbital bristles, anterior pair slightly shorter; ocellars, postocellars and inner and outer verticals well developed. Occiput greyish pruinose. Short black setae on lower $\frac{2}{3}$ of cheeks and parafacies, on anterior $\frac{1}{2}$ of frons, between ocellar and postocellar bristles, along outer parts of orbital plates, and in midcervical patch. Lateral occipital margins with stronger setae and bristles. Antennae testaceous, segment 3 elongate oval, dorsal margin straight. Arista brownish black, without hairs. Palpi yellowish, labium and labella brownish.



Figs. 2-4. *Pherbellia suspecta*. Hull, Quebec, Canada. Inverted views. 2, Postabdomen, sinistral view. 3, Anterior surstylus, viewed in broadest aspect. 4, Posterior view of postabdomen. Figs. 5-8. Posterior surstyli, inverted; a, lateral view; b, posterior view. 5, *P. suspecta*, Hull, Quebec, Canada. 6, *P. subtilis*, Willits, Mendocino Co., California, USA. 7, *P. obscura*, Kvikkjokk, Norrbotten, Sweden. 8, *P. ventralis*, Tzavrou, Corfu, Greece.

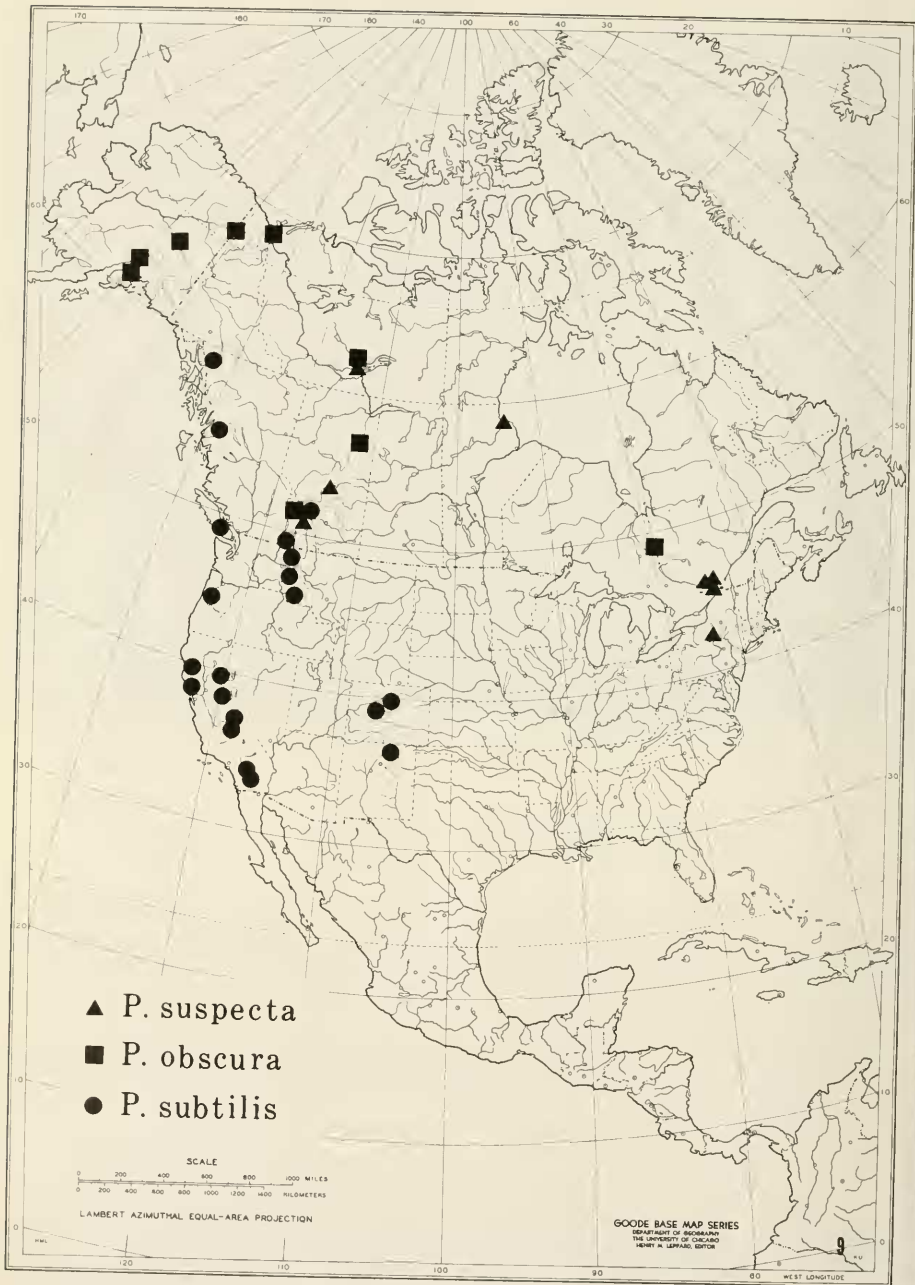


Fig. 9. Collecting sites for *Pherbellia suspecta*, *P. obscura*, and *P. subtilis*.

Thorax grey pruinose dorsally with brownish longitudinal stripes. Mesopleuron with broad, diagonal brown stripe extending below middle but not to lower posterior corner. Remainder of thoracic surfaces light greyish pruinose. Mesopleuron bare. Pteropleuron with a cluster of 6 sinistral and 8 dextral bristles of nearly equal size; no vellar bristles. Sternopleuron with fine short hairs over most of the surface and well-developed bristles ventrally. Prosternum bare.

Coxae testaceous with silvery pruinosity. Forefemur and foretibia brownish black. Tarsal segments brownish. Mid- and hindlegs entirely brownish yellow, slightly infumated.

Wing length 3.7 mm. Membrane greyish yellow hyaline; costal margin and wing veins testaceous; crossveins very slightly infuscated. No stump veins; anterior crossvein oblique, 1st vein ending well beyond level of anterior crossvein; anal vein reaching margin. Haltere, squama, and squamal ciliae yellowish white.

Abdominal segments brownish, slightly infumated dorsally, andrium testaceous; postabdomen as in Figs. 2-5.

Allotype female.—Similar to holotype except in abdominal morphology. Wing length 3.6 mm.

Holotype.—♂, Canada, Quebec, Hull, 12 May 1947, G. E. Shewell.

Allotype.—♀, same data as holotype.

Paratypes.—Same data as holotype (13 ♂, 2 ♀).

Other specimens.—In addition to the above, we have seen material from the following localities: *Alberta*: Banff National Park. *Northwest Territories*: Yellowknife. *Ontario*: Ottawa. *Quebec*: Old Chelsea; Beach Grove.

The following material previously determined (Orth et al., 1980) as *P. subtilis* must now also be ascribed to *P. suspecta*. *Alberta*: 40 mi W of Edmonton (Wabamun Lake). *Manitoba*: Churchill. *New York*: Tompkins Co., Ringwood, Dryden.

Deposition of material.—Holotype, allotype, and paratypes are all the property of the Biosystematics Research Institute, Agriculture Canada, Ottawa, Ontario.

Variation.—This species shows moderate variation in color. Grey areas may be in part replaced by tan or brown. Bristles in the cluster on the pteropleuron vary in number from 5 to 10. Wing length varies from 3.0 to 3.8 mm in males, 3.0 to 4.0 mm in females.

Discussion.—Species within the *P. ventralis* group closely resemble each other in external morphology. Size and color are too variable for positive identification. Examination of dissected male postabdomens in the laboratory remains the best means for separating the various species. The posterior surstylus has excellent characters for separation (Figs. 5-8). Distribution of the three North American species (Fig. 9) shows partial geographic isolation as well as areas of overlap for each species. *Pherbellia suspecta*

is known from Yellowknife, N.W.T.; south to Banff, Alberta; east to Ottawa, Ontario; and south to Dryden, New York. *Pherbellia obscura* is known from Anchorage, Alaska; northeast to Aklavik, N.W.T.; south to Yellowknife, N.W.T. and Banff, Alberta. A single male specimen was recorded at Low Bush, Ontario, a disjunct locality 1600 miles (2550 km) east of any site where *P. obscura* had been previously collected. *Pherbellia subtilis* is known from Lisadale Lake, British Columbia; southeast to Banff, Alberta; southwest to Lake Hemet, California; and east to Cimarron Canyon, New Mexico.

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LITERATURE CITED

- Orth, R. E., G. C. Steyskal, and T. W. Fisher. 1980. A new species of *Pherbellia* Robineau-Desvoidy subgenus *Chetocera* Robineau-Desvoidy from North America (Diptera: Sciomyzidae). Proc. Entomol. Soc. Wash. 82(2): 284-292.